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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/631,236

07/31/2003

Julie Baker

84595CPK

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03/19/2007

EXAMINER

SCHWARTZ, PAMELA R

ART UNIT

PAPER NUMBER

1774

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/631,236

Applicant(s)

BAKER ET AL.

Examiner

Pamela R. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,9-14 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7, 9-14 and 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3-7, 9-14 and 16-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. While the meaning of each of the terms "swellable" and "porous" as used separately in the art is understood, when used together, the terms no longer can be considered to be used in the art recognized manner. This is clear from applicants' explanations provided with their response.

The terms "swellable porous inkjet recording medium" and "swellable porous ink receiving layer(s)" are used in the specification and all of the claims but are not defined in the specification and do not have a well defined meaning in the art. Therefore, one of ordinary skill in the art would not be able to ascertain media that fall within these terms and those that do not. The terms "porous layer" and "swellable layer," as pointed out by applicants in their response, each have an art recognized meaning. Those meanings, however, would not permit use of the terms together to describe a single layer of the same medium. Applicants point out on page 7 of their response that "[i]n a swellable layer, dye mainly diffuses into and through hydrophilic solid material, which material can highly swell in terms of layer thickness" and at page 9, "a porous receiver's function, as understood by those skilled in the art, is one which enables the rapid uptake of ink upon

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application during inkjet printing” and finally on page 10 that “[t]he skilled person in the art would understand that a receiver consisting mainly of inorganic particulate with sufficient binder to hold it together is a porous receiver (because it has pores located between the particles which are capable of absorbing applied ink by capillary action and storing the absorbed ink) and a layer that is mainly hydrophilic polymer such that it swells on application of ink in order to absorb a dye is a swellable (or non-porous) receiver. It is a matter of fact in a particular receiver having a particular composition whether the receiver is essentially porous or not and whether it is essentially swellable or not, and those skilled in the art would have an understanding of this.” These quotations highlight why the terms “swellable” and “porous,” when used individually, have art recognized meanings, but would not have an art recognized meaning when used together. It is noted that applicants have even equated the term “swellable” to “non-porous” when describing a receiver and describe a “continuum” when “a swellable layer becomes a porous layer” at the top of page 11 of their response. As described by applicants in their response and as known and used in the prior art, these terms are mutually exclusive.

Applicants intend to claim a medium having a porous layer that is formed of swellable polymer, but that would not make such a medium a “swellable porous” medium as the terms are used in the art. In normal usage these terms are exclusive of one another, i.e. either the primary mechanism for absorption is capillary action of the pores, or where pores do not exist, swelling of a swellable resin. It is the primary mechanism of ink absorption that defines between a swellable medium and a porous

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medium. One layer of one medium can have only one primary ink absorption mechanism. Therefore, one of ordinary skill in the art would not be able to ascertain how much hydrophilic resin or how many pores were required to make what applicants are referring to as a medium that is both swellable and porous. Definition was required and none was provided. Therefore, these terms cannot be relied upon to claim applicants' invention.

2. Claims 1, 3-7, 9-14 and 16-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For the reasons set forth above, the terms "swellable porous inkjet recording medium" and "swellable porous ink receiving layer(s)" are confusing because they defy art recognized meanings of the terms "swellable" and "porous" and are not defined in the specification. One of ordinary skill in the art would not be able to determine the metes and bounds of applicants' claims. They could not determine how much resin would be considered enough to render the medium "swellable" and how many pores would be too few to render the medium "porous." Clarification is required.

In addition, the language of claims 19 and 20 is confusing. The examiner suggests the following language for claim 19 and similar language for claim 20: "... wherein the ink receiving layers of said inkjet recording medium consist of said one or more layers."

3. Claims 1, 3-7 and 9-12 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeBoer et al. (6,299,302) for reasons of record and for reasons given

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below. With respect to claim 17, it is well known to one of ordinary skill in the art to include one or more coating layers of the same composition in order to increase layer thickness and coat weight. Therefore, inclusion of multiple layers of the same composition would have been obvious to one of ordinary skill in the art for the purpose of increasing overall layer thickness.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4-6, 10 and 13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Baker (EP 1,060,901) for reasons of record and for reasons given below.

6. Claims 1, 3-7 and 9-13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker (EP 1,060,901) for reasons of record and for reasons given below. With respect to claim 17, it is well known to one of ordinary skill in the art to include one or more coating layers of the same composition in order to increase layer thickness and coat weight. Therefore, inclusion of multiple layers of the same composition would have been obvious to one of ordinary skill in the art for the purpose of increasing overall layer thickness.

7. Applicant's arguments filed January 22, 2007 have been fully considered but they are not persuasive. The examiner has reconsidered the "consisting essentially of" language used in some of the claims and has omitted these claims from rejection as appropriate based upon the claim language and persuasive arguments by applicants

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concerning why the additional layers/materials of the references materially affect the basic and novel characteristics of the medium as set forth in the specification.

The examiner has considered the unsigned declarations submitted with the response by Ms. Baker and Mr. De Boer. These declarations would not be persuasive if signed. The phrase "no appreciable level of swelling" is an opinion and the words "appreciable level" indicate that the layer can be swellable to some degree. Any level of swelling is enough to be within the scope of the instant claims. Applicants could have claimed a required amount of hydrophilic resin but have instead relied on the broad undefined term "swellable." De Boer also provides his opinion of what would happen if blowing agent were added to a layer of the medium made in accordance with his patent. No scientific basis for the opinion is provided.

Applicants state they have pointed out "the failure of the Examiner to duly recognize the image-receiving function of the claimed ink-receiving layer." This failure was intentional on the part of the examiner because the term "image-receiving" could have been, but was not used in the claims. The term used in the claims is "ink-receiving" which is broader in scope than "image-receiving" which refers only to the colorant portion of the ink. "Ink-receiving" includes layers that are intended to receive any portion of the ink, the colorant or the fluid carrier for the colorant. Applicants are well aware of this difference in scope. The examiner is not going to respond to everything in the summary of the interview, but instead will respond to the remarks set forth concerning each rejection.

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With respect to De Boer et al., applicants use open claim language in most of the claims. The layer of the prior art at issue here is definitely a porous layer. With respect to the medium being porous, using the term in its broadest sense, the medium is porous since a portion of the medium is porous. Applicants' remarks attribute numerous other requirements to "porous" as used in their claims, but unfortunately, they have not provided a definition in the specification and are not using the term in a manner consistent with the prior art. Applicants' arguments are persuasive for claims 13 and 14 because the pigment and the additional layer would each materially affect the ink absorption characteristics of the medium. With respect to the DeBoer Declaration, the prior art disclosure is not limited to the scope of the examples. It is noted that the motivation for foaming the layer of DeBoer et al. is the inclusion of a blowing agent as a disclosed additive to the layer. The usual purpose for inclusion of blowing agent is to foam a composition.

The examiner has not required numerical limits to define "swellable" and "porous," however, in the absence of some definition, the terms must be given their broadest interpretation. That is the interpretation the examiner has used for this examination. Applicants argue that due to the low level of swellable polymer in the layer of the reference, it cannot be considered a "swellable layer." However, up to 15% of the materials of the layer are admittedly swellable and there is nothing to indicate to one of ordinary skill in the art that this material is prevented from swelling by the rest of the composition, most of which is clay which is also swellable.

Because applicants use open claim language in most claims, the medium of the European Publication to Baker reads on the claims even though there are additional layers present. Applicants keep trying to overcome rejections by “characterizing” media of the prior art as one of “porous” and “swellable,” and by inherently excluding the other. Under the criteria created by applicants in their response for characterizing a medium, their claimed medium also cannot properly be referred to as both “porous” and “swellable.” As stated earlier, the examiner will give these terms their broadest meanings that are consistent with usage in the art. In this case, the base layer of the reference is a swellable layer. It is formed from a swellable polymer as the materials recited at [0019] are swellable. The layer is also porous when it is made porous as disclosed by the reference at [0022]. Using the terms broadly, the medium is also porous because it has a porous base layer and because the top layer does not prevent ink from reaching the base layer [0018]. At the bottom of page 19, applicants once again attribute several concurrent meanings to the term “porous.” The examiner believes that these criteria narrow the term “porous” from how it is used in the prior art. As used in the art, the medium of Baker is porous because there is a porous layer in the medium that is included as part of the ink absorption mechanism.

Applicants also argue that the base layer isn't ink receiving because it primarily absorbs ink solvent. This isn't persuasive because ink solvent is part of the ink, and because the layer will also receive some colorant that passes through the top layer. The reference suggests to one of ordinary skill in the art that at least some colorant will reach the base layer by disclosing that mordant may be added to the layer [0026]. The

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usual purpose in the art for including mordant is to fix colorant. Next applicants argue that that term “ink-receiving” layer as used in their claims means “image-receiving layer.” This is not persuasive. Applicants can claim an “image-receiving layer” if that is what they intend to claim. There is no support in the specification for this narrowed definition of “ink-receiving layer.”

Applicants imply by their arguments that the term “ink-receiving layer” in conjunction with the layer being “essentially capable of receiving dye” cannot refer to a base layer with an outer layer that is an absorbent polymer material. Applicants imply that ink will only reach the base layer in exceptional circumstances when “so much ink [has been applied] as to effectively saturate the top image receiving layer such that the receiver would no longer effectively operate as an inkjet recording element.” Based upon the references inclusion of mordant in the base layer, this interpretation is not persuasive. There is clearly an intent demonstrated by the disclosure of the Baker reference that the medium may have colorant reach the base layer and the medium will still function as disclosed. Otherwise, there would be no reason to spend the effort and money to incorporate mordant into the base layer.

It is noted that the phrase “essentially capable of receiving dye” is supported by the specification, but does not appear to be defined or even used therein. Therefore, the phrase must be given its broadest reasonable meaning. Applicants cannot submit a definition for this phrase now and expect it to be considered limiting when neither the phrase nor the definition was provided at the time of applicants' invention.

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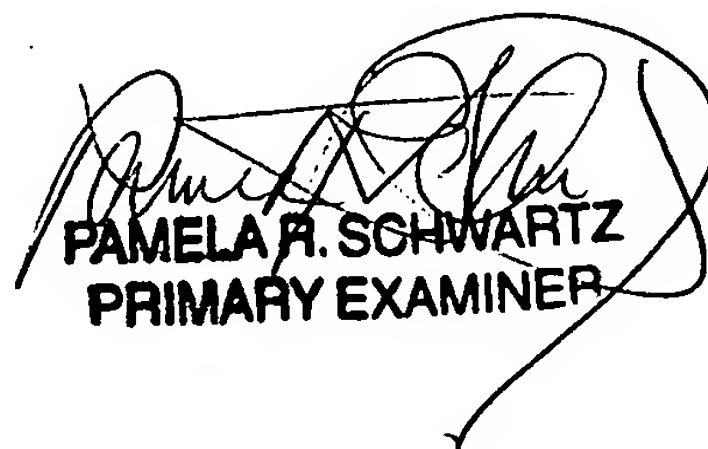
Finally, as requested, the examiner met with her supervisor, Rena Dye, on March 13, 2007 to discuss the proposed rejection in this case.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela Schwartz whose telephone number is (571) 272-1528.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PRSchwartz
March 14, 2007


PAMELA R. SCHWARTZ
PRIMARY EXAMINER